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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

William Y. Conwell

Application No.: 09/670,113

Filed: September 26, 2000

For: METHOD OF PROCESSING TEXT
FOUND IN IMAGES

Examiner: S. Patel

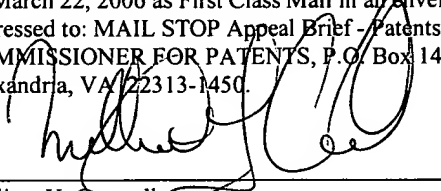
Date: March 22, 2006

Art Unit 2621

Confirmation No. 4862

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William Y. Conwell
Attorney for Appellant**TRANSMITTAL LETTER**

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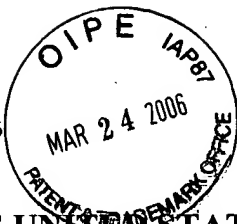
Respectfully submitted,

DIGIMARC CORPORATION

By



William Y. Conwell
Registration No. 31,943



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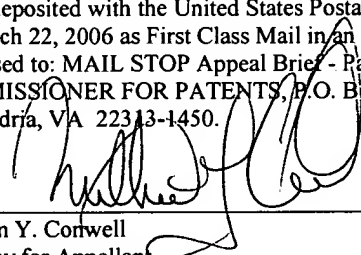
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William Y. Conwell
Attorney for Appellant

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P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

This brief is in furtherance of the Notice of Appeal filed January 23, 2006. Please charge the fee required under 37 CFR 1.17(f) to deposit account 50-1071 (see transmittal letter).

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I. REAL PARTY IN INTEREST

The real party in interest is Digimarc Corporation, by an assignment from the inventor recorded at Reel 017311, Frames 812-13, on March 15, 2006.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF CLAIMS

Claims 3, 5 and 8-20 and 22-25 now stand finally rejected (in a fifth Office Action), and are appealed. The remaining claims have been canceled.

IV. STATUS OF AMENDMENTS

All Amendments have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Appellant's claimed invention concerns hiding information in imagery, using steganography.

Steganography, sometimes termed digital watermarking, is the science of hiding secret information, without leaving any apparent evidence of data alteration.¹

The next page shows two images. To the human eye they appear essentially identical. The lower image, however, conveys a hidden photographer ID (617209) and a hidden image ID (60320), which have been steganographically embedded in the image using a popular digital watermarking tool.²

¹ Digital watermarking is a well developed art that is not belabored in the present specification. Instead, the present specification incorporates-by-reference earlier patents and applications on the subject, as detailed in fn. 3.

² The digital watermarking of the lower image was performed using a Digimarc digital watermarking tool that is provided with Adobe's Photoshop software. Third parties who find digitally watermarked images (e.g., posted on the Web) can use a corresponding detector tool distributed by Adobe to discern these IDs. These IDs can



Digital watermarking can take many forms - several are detailed in one of the assignee's prior patents that has been incorporated-by-reference in the present specification.³ One form of digital watermarking favored by the present Appellant involves making subtle changes to the luminance of image pixels to thereby encode a hidden multi-bit digital data payload in the image. The changes are generally too slight to be perceptible to human viewers of the watermark-encoded image. But when such image is computer analyzed, the encoded digital data can be recovered.

The claimed subject matter particularly concerns the use of such data hiding in photographs that, themselves, depict some text.⁴ For example, a surveillance photo of a car - showing its vehicle license plate - may be digitally watermarked so as to invisibly encode the text found on the license plate (*i.e.*, as digital data represented by subtle variances in the pixel values).⁵ The image can then be more easily indexed and searched by its text contents - by reference to this steganographic data.⁶

One particular embodiment of the invention (claim 3) is a method that processes an image including a depiction of text.⁷ The depicted text is recognized (*e.g.*, by an OCR engine).⁸ A steganographic watermark is then encoded in the image.⁹ This steganographic watermark serves to associate the image with the recognized text.¹⁰ The encoded watermark is generally imperceptible to humans viewing the encoded image.¹¹

Another particular embodiment of the invention (claim 8) is a method of augmenting image data collected by a security monitoring camera.¹² A frame of image data from the security

be used to identify the photographer and the image through use of the Digimarc MarcCentre database.

³ See, *e.g.*, application 09/503,881, filed February 14, 2000 (now patent 6,614,914, submitted with the attached Evidence Appendix), incorporated-by-reference through text found at page 1, line 28 - page 2, line 2 of the present application.

⁴ See, *e.g.*, specification, page 1, lines 14-15.

⁵ See, *e.g.*, specification, page 2, lines 7-11.

⁶ See, *e.g.*, specification, page 1, lines 15-20.

⁷ See, *e.g.*, specification, page 1, lines 14-15.

⁸ See, *e.g.*, specification, page 2, lines 22-23.

⁹ See, *e.g.*, specification, page 1, lines 14-15.

¹⁰ See, *e.g.*, specification, page 1, lines 15-17.

¹¹ See, *e.g.*, incorporated-by-reference patent 6,614,914 (Evidence Appendix) at col. 1, lines 25-29.

¹² See, *e.g.*, specification, page 2, line 7.

monitoring camera is analyzed for text information depicted therein.¹³ The image data is then digitally watermarked with steganographically encoded data.¹⁴ This digital watermark associates the image data with the text information,¹⁵ and is generally imperceptible to humans viewing the digitally watermarked frame of image data.¹⁶

Another particular embodiment of the invention (claim 10) concerns an electronic document that comprises a graphical representation of text (*e.g.*, a FAX, PDF, etc.), but does not include ASCII data corresponding thereto.¹⁷ This document is analyzed for text information using an OCR process.¹⁸ The document is then digitally watermarked with steganographically encoded data.¹⁹ Again, the digital watermark associates the electronic document with the text information,²⁰ yet the watermark is generally imperceptible to humans viewing the watermarked document.²¹

Another particular embodiment of the invention (claim 16) is an apparatus including a scanner for producing scan data,²² an OCR engine for recognizing text from the scan data,²³ and a watermarker that alters an output from the apparatus to steganographically encode a watermark therein.²⁴ The watermark serves to associate the output of the apparatus with the text.²⁵

¹³ See, *e.g.*, specification, page 2, lines 8-10.

¹⁴ See, *e.g.*, specification, page 2, lines 10; *see also* incorporated-by-reference patent 6,614,914 (Evidence Appendix) at col. 1, lines 25-29.

¹⁵ See, *e.g.*, specification, page 1, lines 15-17; page 2, lines 10-11.

¹⁶ See, *e.g.*, incorporated-by-reference patent 6,614,914 (Evidence Appendix) at col. 1, lines 25-29.

¹⁷ See, *e.g.*, specification, page 2, lines 12-13.

¹⁸ See, *e.g.*, specification, page 2, lines 13-14.

¹⁹ See, *e.g.*, specification, page 2, lines 14-15; *see also* incorporated-by-reference patent 6,614,914 (Evidence Appendix) at col. 1, lines 25-29.

²⁰ See, *e.g.*, specification, page 2, lines 15-16.

²¹ See, *e.g.*, incorporated-by-reference patent 6,614,914 (Evidence Appendix) at col. 1, lines 25-29.

²² See, *e.g.*, specification, page 2, lines 17-18.

²³ See, *e.g.*, specification, page 1, lines 22-23.

²⁴ See, *e.g.*, specification, page 2, lines 18-19.

²⁵ See, *e.g.*, specification, page 2, line 20.

VI. GROUND S OF REJECTION

Claims 3, 5, 16, 18-20 and 23 stand rejected under § 102 over Li (5,506,697).

Claims 8, 9, 22 and 24 stand rejected under § 103 over Alves (6,747,687) in view of Li.

Claims 10-15 stand rejected under § 103 over Sites (6,799,302) in view of Li.

Claim 17 stands rejected under § 103 over Li in view of Venkatesan (6,801,999).

Claim 25 stands rejected under § 103 over Alves in view of Li, and further in view of Conover (6,373,960).

VII. ARGUMENT**1. Discussion of Li**

Each of the rejections is premised – in whole or in part – on patent 5,506,697 to Li.

Li does not involve steganography or digital watermarking.

Li is an example of the opposite of steganography/digital watermarking: the use of a data representation that is overt and conspicuous to human viewers.

The Office has interpreted the item denoted by reference numeral 45 in Li's Fig. 3 as a watermark. This item, shown more particularly in Li's Fig. 2, is a bar code. This item is not a watermark. It is not hidden, nor even inconspicuous:



FIG. 2

All of the rejections are premised on an erroneous interpretation of Appellant's claims by the Office. In particular, the Office contends that Li's marking with the illustrated barcode meets each of the following claim limitations:

- "a steganographic watermark" (claim 3);
- "digitally watermarking ... wherein said watermark is generally imperceptible to

humans” (claims 8, 10);

- “a watermarker ... to steganographically encode a watermark” (claim 16).

When the claims are given their proper interpretation, Li’s barcode meets none of these limitations. For this reason – as well as others – each of the rejections fails.

2. **Claim 3 (§ 102: Li)**

Claim 3 is an independent claim, which reads as follows:

3. A method comprising:
receiving data corresponding to an image, the image including a depiction of text;
recognizing at least some of said depicted text; and
encoding a steganographic watermark in said image, said watermark serving to associate said image with said recognized text, said encoded watermark being generally imperceptible to humans from said image.

The claim is rejected as allegedly anticipated by Li (5,506,697).

The final rejection contends:

*With regard to claim 3, Li discloses a method ... comprising ... encoding a watermark in said image (Fig. 3 element 45)...*²⁶

Not so. Li does not disclose “encoding a watermark.” (The Action failed to address the “steganographic” qualifier that precedes “watermark” in the claim.)

What would an artisan – reading Appellant’s specification – understand the term “watermark” to mean?

Appellant’s specification incorporates-by-reference prior application 09/503,881 for its teachings on watermarks.²⁷ (That application is now patent 6,614,914; a copy is submitted as the

²⁶ November 15, 2005, Final Rejection, page 3, lines 5-8.

²⁷ See paragraph bridging pages 1 and 2 in the present specification – updated to include issued patent number in amendment filed February 5, 2004.

Evidence Appendix to this Brief.)

That document makes clear that one of the attributes of a watermark is that it is essentially imperceptible. For example, that incorporated-by-reference document states:

- “Digital watermarking is a process for modifying media content to embed a machine-readable code into the data content. The data may be modified such that the embedded code is imperceptible or nearly imperceptible to the user, yet may be detected through an automated detection process.”²⁸
- “The embedder encodes a message into a digital signal by modifying its sample values such that the message is imperceptible to the ordinary observer in output form.”²⁹
- “Generally, the perceptual analysis employs a HVS [human visual system] model to identify signal frequency bands and/or spatial areas to increase or decrease watermark signal intensity to make the watermark imperceptible to an ordinary observer.”³⁰
- Digital watermarking technology allows the user to embed digital messages within media content. These digital messages are imperceptible to humans but can be read by computers and specialized devices.³¹

The Federal Circuit, in its recent Philips *en banc* decision, reiterated longstanding precedent, stating: “The specification is, thus, the primary basis for construing the claims.”³²

The meaning of the term “watermark” in Appellant’s claims must proceed primarily from the specification.

In the present case, an artisan would understand from the specification that a watermark is essentially imperceptible. The bar code taught by Li would not be understood by an artisan as a watermark. (The Examiner concedes Li’s element 45 is perceptible.³³)

An artisan following Li’s teaching would be left with a document bearing an unsightly pattern of black and white lines – detracting from the document’s original quality. (See document 20 in Li’s Fig. 1.) That is the antithesis of a watermark.

²⁸ Patent 6,614,914, col. 1, lines 25-29, emphasis added.

²⁹ Patent 6,614,914, col. 6, lines 54-56, emphasis added.

³⁰ Patent 6,614,914, col. 12, lines 10-14, emphasis added.

³¹ Patent 6,614,914, col. 35, lines 2-5, emphasis added.

³² *Philips v. AWH Corp.*, Nos. 03-1269, 03-1286 (Fed. Cir. July 12, 2005), slip op. at 14, citing *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985).

³³ November 15, 2005, Final Rejection, page 2, middle of page.

The Examiner is correct that he should interpret the claim language as broadly as possible.³⁴ But he may not construe it in a manner contrary to its meaning given by the specification. That violates the Federal Circuit's holding in *Philips*. And that is what has been done here.

Since Li fails to teach a watermark, it cannot anticipate Appellant's claims requiring a watermark.

A second grounds for reversal is that the rejection failed to address the qualifier "steganographic" that modifies the claimed watermark. Again, artisans would understand (*e.g.*, from the specification, as well as from common usage) that steganography refers to a marking that is hidden.

Moreover, the imperceptible nature of the watermark is made explicit by the final clause of the claim, which specifies, "*said encoded watermark being generally imperceptible to humans from said image.*" The Action failed to address (and apparently failed to consider) this limitation. Such disregard of claim language is a third grounds for reversal. (Yet further, the Office elsewhere conceded that Li does not disclose "digital watermark being essentially imperceptible to human viewers."³⁵)

Because Li does not teach that for which it has been cited, the rejection of claim 3 must be reversed.

³⁴ November 15, 2005, Final Rejection, page 2, 7 lines from bottom.

³⁵ November 15, 2005, Final Rejection, page 7, lines 4-5.

3. Claim 16 (§ 102: Li)

Claim 16 is an independent claim, which reads as follows:

16. An apparatus comprising:
a scanner for producing scan data corresponding to an original document;
an OCR engine for recognizing text from said scan data; and
a watermarker that alters an output from said apparatus to steganographically encode a watermark therein, the watermark serving to associate said output with said stored text.

The Final Rejection states:

With regard to claim 16 Li discloses an apparatus (figure 3) comprising ... a watermarker that alters an output from said apparatus to encode a watermark therein ... (application data source 64, col. 9, lines 18-34).

Again, this is incorrect. Li does not disclose a “watermarker.” Li teaches encoding a conspicuous barcode.

Again, the Action has ignored the steganographic limitation required by the last clause of the claim. As noted, Li has no teaching concerning “steganographically encoded data.” (Again, the Office has admitted that Li does not teach any marking that is essentially imperceptible to humans – the gist of “steganographic.”³⁶)

Again, the art does not teach that for which it has been cited. Again, the rejection must be reversed.

4. Claim 17 (§ 103: Li + Venkatesan)

Claim 17 depends from claim 16 and is similarly allowable. Moreover, claim 17 is patentable independently. The claim reads:

17. An apparatus according to claim 16 wherein the output comprises a hardcopy page, and said watermark serves as a pointer to a memory location in which said recognized text is stored.

³⁶ November 15, 2005, Final Rejection, page 7, lines 4-5.

This claim stands rejected over Li in view of Venkatesan (6,801,999).

Li concerns a FAX machine that coverts alphanumeric data on a scanned document into a 2D barcode – permitting an apparatus that receives the paper FAX to obtain a digital counterpart of the alphanumeric information.

The secondary reference, Venkatesan, relates to a wholly different field of endeavor: a technique for making software objects resistant to break-once-run-everywhere (MORE) hacking.³⁷

Only through hindsight would an artisan seek to modify the FAX technology of Li to incorporate teachings from the BORE-resistant disclosure of Venkatesan.

The Final Rejection urges the following rationale for combing the teachings of Venkatesan with Li:

The motivation for doing so is to define a plurality of specific locations as suggested by Venkatesan at col. 13, lines 44-48. Therefore, it would have been obvious to combine Venkatesan with Li to obtain the invention as specified in claim 17.

The offered rationale is not sufficient. Rather than evidence obviousness, it betrays impermissible application of hindsight. Obviousness is not thereby established.

The Final Rejection failed to establish *prima facie* obviousness. Again, the rejection should be reversed.

5. Claim 8 (§ 103: Alves + Li)

Claim 8 is an independent claim, which reads as follows:

8. A method of augmenting image data collected by a security monitoring camera, comprising:
analyzing a frame of image data from said security monitoring camera for text information depicted therein; and
digitally watermarking said image data with steganographically encoded data;
wherein said digital watermark associates the image data with the text information, and
wherein said watermark is generally imperceptible to humans viewing said frame of image data.

³⁷ Patent 6,801,999, Abstract.

Claim 8 stands rejected under § 103 over Alves (6,747,687) in view of Li.

One reason the rejection must be reversed is the Office's erroneous interpretation of Li's barcode as fulfilling the "digitally watermarking ... with steganographically encoded data" claim limitation. As noted, Li does not so teach. Thus, even if the references were combined as proposed, the claimed combination could not result. As such, *prima facie* obviousness has not been established.

A second reason the rejection must be reversed is the claim requirement "wherein said watermark is generally imperceptible to humans." In connection with another claim, the Office admitted, "Neither Alves nor Li expressly disclose digital watermark being essentially imperceptible to human viewers."³⁸ Thus by the Office's own admission, even if combined, the art can not yield the arrangement of claim 8.

A third reason the rejection must be reversed is because the art does not suggest the claimed combination. The Office's assertion otherwise draws impermissibly on hindsight reconstruction.

The principal reference, Alves, concerns a vehicle recognition system, *e.g.*, for parking garages that charge parking fees based on length-of-stay. When a vehicle enters Alves' garage, an image of the vehicle is captured. This image is time stamped, and analyzed to produce a "visual signature" by which the vehicle can be distinguished from others. This signature can be based, *e.g.*, on the color, time, style, tires, wheelcovers, collision damage, etc., of the imaged vehicle.³⁹ Vehicles leaving the garage are also imaged. Each such image is matched, based on the "visual signature," to an image of a vehicle that earlier entered the garage, and the length-of-stay is thereby computed. The driver is charged a fee accordingly.

An artisan confronting the Alves patent may find various modifications thereto obvious. However, the Office has not convincingly demonstrated that such an artisan would have looked to Li's FAX machine technology, and its use of a 2D barcode into a FAX, as such an obvious modification.

³⁸ November 15, 2005, Final Rejection, page 7, lines 4-5.

³⁹ Patent 6,747,687, column 2, lines 18-21.

Again, the motivation recited in the Action for modifying Alves in accordance with Li is insufficient. The Action states:

*The motivation for doing so is to authenticate the document by encoding and digitally embedding element 45 into document 50 to as seen in Figure 3 and suggested throughout the invention of Li.*⁴⁰

“The motivation for doing so is to *authenticate*...”? Neither reference speaks of authentication.

“...the *document*”? Alves does not concern a document. (Indeed, it appears this offered rationale does not refer or relate at all to Alves.)

Again, it appears the Examiner has impermissibly pieced together disparate teachings from unrelated references to advance a rationale not supported by the art, in contravention of the requirements of § 103.

Again, obviousness is not thereby established. The rejection of claim 8 should be reversed.

6. Claim 9 (§ 103: Alves + Li)

Claim 9 depends from claim 8 and is similarly allowable. Moreover, claim 9 is patentable independently. The claim reads:

9. The method of claim 8 wherein the frame of image data includes a depiction of a vehicle license plate, and said text information comprises text on said license plate.

Alves notes that the vehicle images captured by his system may include part or all of license plates. However, he explains that the imaged license plate information can be of *no consequence*:

*[R]eading any or all of a license plate is not necessary for the extraction of visual signatures related to particular cars.*⁴¹

⁴⁰ November 15, 2005, Final Rejection, page 4, 7th – 4th lines from bottom.

⁴¹ Patent 6,747,687, column 2, lines 16-18.

Indeed Alves touts, as an *advantage* of his invention, that it “does not require the license plates to be readable.”⁴²

Moreover, in cases where the license plate is visible in one of Alves’ images, he stresses, “The matcher never explicitly “reads” the license plate.”⁴³

Notwithstanding these contrary teachings in the primary reference, the Final Rejection urges that text information from a license plate be “analyzed” (per independent claim 8).

Again, one of ordinary skill in the art would not modify the primary reference in a manner that contravened the advantages and teachings noted by its inventor - - at least not without hindsight.

Again, the Office has failed to meet the requirements of § 103. Again, the rejection must be reversed.

7. Claim 22 (§ 103: Alves + Li)

Claim 22 depends from claim 8 and is similarly allowable. Moreover, claim 22 is patentable independently. The claim reads:

22. The method of claim 8 that includes storing said text information in a data repository, and wherein said digital watermark indicates the location of the stored text information in said data repository.

The Office provided no rationale as to why such a teaching would be drawn from Li, and applied to modify Alves.

Again, the Office has failed to establish *prima facie* obviousness. Again, the rejection must be reversed.

⁴² Patent 6,747,687, column 2, line 32.

⁴³ Patent 6,747,687, column 4, lines 50-51.

8. Claim 25 (§ 103: Alves + Li + Conover)

Claim 25 depends from claim 8 and is similarly allowable. Moreover, claim 25 is patentable independently. The claim reads:

25. The method of claim 8 wherein said digital watermark is essentially imperceptible to human viewers of image data collected by the security monitoring camera.

The Office admits that neither Li nor Alves teaches any watermark that is “essentially imperceptible to human views of image data.” (This negates the Office’s contrary assertion regarding a parallel limitation found in independent claim 8, and is relevant too to the “steganographic” limitations found in independent claims 3, 10 and 16.)

The tertiary reference, Conover, teaches a technique for digitally watermarking compressed domain video. Its encoding of data is essentially imperceptible to human viewers.

Why would an artisan be motivated to alter Alves’ parking lot vehicle-matching technology - - as earlier modified by Li’s FAX technology - - to incorporate compressed domain video digital watermarking technology? The Office proposes:

The motivation for doing so is that the watermark will be invisible to the human eye unless the compressed portion (or an image) is decompressed as suggested by Conover. Especially, the compressed coded symbol 45 of Li (at col. 7, lines 48-51) can be imperceptible when the image is being printed to protected from a unauthorized person.

The meaning of this rationale is not apparent. Again, it appears to comprise a labored piecing-together of disparate elements from unrelated art, augmented by the Examiner’s own hindsight (e.g., the reference to ‘protected from an unauthorized person’).

Again, the Office has failed to meet the threshold burden imposed by § 103. Again, the rejection must be reversed.

9. **Claim 10 (§ 103: Sites + Li)**

Claim 10 is an independent claim, which reads as follows:

10. A method comprising:
receiving an electronic document, the document comprising a graphical representation of text, but not including ASCII data corresponding thereto;
analyzing said document for text information using an OCR process; and
digitally watermarking said electronic document with steganographically encoded data;
wherein said digital watermark associates the electronic document with the text information, and wherein said watermark is generally imperceptible to humans viewing said electronic document.

Claim 10 stands rejected as obvious over Sites (6,799,302) in view of Li.

Sites is an Adobe patent concerning the OCR capability of its Acrobat program, by which words within a scanned document can be recognized and made searchable.

The Action concedes that Sites does not teach any digital watermarking; Li is cited to redress this shortcoming.

As noted above, Li does not teach any digital watermarking either. He adopts an opposite marking technology – the overt, conspicuous 2D barcode.

Accordingly, even if combined, the cited references cannot yield the claimed combination.

A second reason the rejection of claim 10 should be reversed is the claim requirement that “said watermark is generally imperceptible to humans.” The Office elsewhere conceded that Li does not disclose “digital watermark being essentially imperceptible to human viewers.”⁴⁴

Again, even if combined, the cited references cannot yield the claimed combination.

A third reason for reversing the rejection of claim 10 is the inadequate rationale offered in support of the proposed combination of elements from Sites and Li. The Final Rejection stated:

⁴⁴ November 15, 2005, Final Rejection, page 7, lines 4-5.

The motivation for doing so is to authenticate the electronic document by encoding and digitally embedding element 45 into document 50 as seen in Figure 3 and suggested throughout the invention of Li.

Again, this is hindsight. Neither Sites nor Li teaches "authenticating" anything.

Again, the Office failed to establish *prima facie* obviousness of claim 10. Again, the rejection must be reversed.

VIII. CONCLUSION

None of the rejections meets the Office's burdens under § 102 and § 103. Accordingly, the Board is requested to reverse the rejections and direct allowance of the claims.

Date: March 22, 2006

CUSTOMER NUMBER 23735

Phone: 503-469-4800
FAX 503-469-4777

Respectfully submitted,

DIGIMARC CORPORATION

By



William Y. Cornwell
Registration No. 31,943

CLAIMS APPENDIX

PENDING CLAIMS

1-2. (Canceled)

3. A method comprising:

receiving data corresponding to an image, the image including a depiction of text;

recognizing at least some of said depicted text; and

encoding a steganographic watermark in said image, said watermark serving to associate said image with said recognized text, said encoded watermark being generally imperceptible to humans from said image.

4. (Canceled)

5. The method of claim 3 in which said recognizing includes recognizing by an automated OCR process.

6-7. (Canceled)

8. A method of augmenting image data collected by a security monitoring camera, comprising:

analyzing a frame of image data from said security monitoring camera for text information depicted therein; and

digitally watermarking said image data with steganographically encoded data;

wherein said digital watermark associates the image data with the text information, and wherein said watermark is generally imperceptible to humans viewing said frame of image data.

9. The method of claim 8 wherein the frame of image data includes a depiction of a vehicle license plate, and said text information comprises text on said license plate.

10. A method comprising:
receiving an electronic document, the document comprising a graphical representation of text, but not including ASCII data corresponding thereto;
analyzing said document for text information using an OCR process; and
digitally watermarking said electronic document with steganographically encoded data;
wherein said digital watermark associates the electronic document with the text information, and wherein said watermark is generally imperceptible to humans viewing said electronic document.

11. The method of claim 10 in which the electronic document comprises FAX data.

12. The method of claim 10 in which the electronic document comprises a PDF document.

13. The method of claim 10 in which receiving an electronic document comprises scanning a paper document on a platen, and producing graphical data corresponding thereto.

14. The method of claim 10 wherein said digital watermark directly encodes the electronic document with at least some of said text information.

15. The method of claim 10 that includes storing the text information in a data repository, and wherein the digital watermark associates the electronic document with said information in the data repository.

16. An apparatus comprising:
a scanner for producing scan data corresponding to an original document;
an OCR engine for recognizing text from said scan data; and
a watermarker that alters an output from said apparatus to steganographically encode a watermark therein, the watermark serving to associate said output with said stored text.

17. An apparatus according to claim 16 wherein the output comprises a hardcopy page, and said watermark serves as a pointer to a memory location in which said recognized text is stored.

18. An apparatus according to claim 16, wherein the output comprises a hardcopy page, and said watermark serves to directly encode at least a portion of said recognized text in said output.

19. The method of claim 3 that includes storing said recognized text in a data repository, and wherein said watermark serves as to associate said image with said stored text.

20. The method of claim 3 wherein said watermark serves to directly encode at least a portion of said recognized text in said image.

21. (Canceled)

22. The method of claim 8 that includes storing said text information in a data repository, and wherein said digital watermark indicates the location of the stored text information in said data repository.

23. The method of claim 3 in which said encoding follows said recognizing.

24. The method of claim 8 in which said analyzing comprises performing an OCR process on said depicted text information.

25. The method of claim 8 wherein said digital watermark is essentially imperceptible to human viewers of image data collected by the security monitoring camera.

EVIDENCE APPENDIX

Patent 6,614,914 (issued from application 09/503,881, and incorporated-by-reference into the present specification by text found at page 1, line 28 – page 2, line 2).

RELATED PROCEEDINGS APPENDIX

None